Geophysical Research Abstracts, Vol. 8, 02705, 2006
SRef-ID: 1607-7962/gra/EGU06-A-02705

Progress in understanding sea level processes in the Mediterranean Sea.

M.Tsimplis(1), D. Gomis(2), E. Álvarez-Fanjul(3), L. Fenoglio-Marc(4), B. Pérez(3), A.Shaw(1), S. Mangiarotti(5), B. Martín-Míguez(3), T. Papadopoulos (7).

(1) National Oceanography Centre, Southampton, UK; (2) Institut Mediterrani d'Estudis Avançats (UIB _ CSIC), Mallorca, Spain.;(3) Area del Medio Físico, Puertos del Estado, Madrid, Spain;(4) Institute of Physical Geodesy, Darmstadt University of Technology, Darmstadt, Germany;(5) Legos, 14, avenue Edouard Belin, 31400 Toulouse, France;(6)Departamento de Física Aplicada, Universidad de Málaga, Spain;(7) Mineral Resources Engineering Department, Technical University of Crete, 73 100, Chania, Greece.

We present developments in understanding long and short-term processes in sea level variability in the Mediterranean Sea on the basis of tide gauge data, hydrographic databases and a two dimensional model. We present results on changes in the Mediterranean trends during the 1990s, coinciding with changes in the sea level gradients across the Strait of Gibraltar and the Strait of Sicily. We present some evidence that these may be caused by the Eastern Mediterranean Transient (EMT). We further search for evidence of the EMT in high frequency sea level records. We reconfirm the close correlation of the NAO with sea level variability and we reconstruct NAO-related sea level variability backwards in time for the past 4 centuries.